"Prof. Cockerell has drawn my attention to the fact that he published a description of a *Ceroplastes ephamm* (from W. Africa) in the 'Entomologist' of May 1899. He has also sent me typical examples of the insect, which show me that it is identical with my *C. africanus* (var. *cristatus*) [Ann. & Mag. Nat. Hist. 1899, iv. p. 190]. Prof. Cockerell in his description gives the number of antennal joints as six only, but he particularly mentions that his specimens were not in very good preservation. . . . . I should be greatly obliged if you would send a short note to the 'Annals and Magazine' to correct the name." E. Ernest Green.

On the Lateral Cephalic Organs of Glomeris.

By N. de Zograf.

The celebrated German anatomist Francis Leydig has depicted, on one of the plates accompanying his unfinished work 'Ueber den Bau des thierischen Körpers,' published in 1864, a head of *Glomeris*, having on its lateral walls two horseshoe-shaped organs presenting in their interior a somewhat considerable cavity which communicates with the outside by means of a very narrow longitudinal slit. Leydig has shown that the internal wall of these organs is very thick, that it is innervated by a branch coming from the neck in the region of the optic trunk, and hence that these structures ought to be looked upon as organs of sense.

Following Leydig, the Hungarian zoologist Cömösvary described the same organs in several myriapods without giving a more detailed account of them; it is by the name of *Cömösvary* that they are to-day designated. The French zoologist Saint-Rémy and the German entomologist Curt Hennings so call them, the latter having given a description of their histology in the third number of the 'Sitzungsberichte der Gesellschaft naturforschenden Freunde zu Berlin' for the year 1899.

In my article on the relationships of the Arthropoda, published in 1892 in the 'Comptes Rendus du Congrès international de Zoologie,' I pointed out what great morphological interest these organs possess, especially if they are compared with the embryonic cephalic grooves of other myriapods, of some insects and crustaceans, and with the cephalic organs of some annelids, for example the Capitellidæ. Unfortunately *Glomeris* is very rare in Russia and only met with in the south-western portion of the empire: it was not therefore until the summer of 1898 that, through the kindness of M. E. Bouvier, Professor at the Jardin des Plantes, I was able to obtain enough material for my researches. I then received specimens of *Glomeris marginata* which M. Bouvier had collected in the forests in the neighbourhood of Dieppe. Every animal composing two successive consignments had perished during the long journey from Dieppe to Moscow; but a third batch sent after the great heat of the summer arrived safe and sound at Moscow, and provided me with material for my researches.

The lateral cephalic organs of *Glomeris* have a very curious and

original structure. Herr Hennings has shown that the thickness of the inside wall of these structures consists of sensitive epithelial cells, the nuclei of which are found in the proximal parts, while the more superficial layers contain some small granules in the protoplasm of the cells. Herr Hennings rightly considers the cells of this wall of the organs to have a nervous function; those which he represents in his figure 2, and which he calls cells of the sensitive epithelium, are glandular cells. The structure of the internal wall in question of the lateral organ is considerably complicated.

The wall consists of very abundant glandular cells, which communicate by means of very narrow canals with the bottom of the cavity of the organ; on the chitinous surface of the bottom minute pores even may be made out through which the secretion of the cells enters the cavity of the organ.

Besides the glandular cells there are to be seen in the still more proximal layers not far from the cells of the adipose tissue large ganglionic cells, which are prolonged at their proximal ends into the nerves which spring from the main nerve of the organ, while at their distal extremities they are drawn out into long terminal nervous filaments; these filaments, which can be well seen when examined by Ramon y Cajal's method, reach the chitinous layer and sometimes raise it, forming little cushions. If a section is made parallel to the surface of the cavity, it can be distinctly seen that each terminal filament, which has here a structure recalling the rhabdomeres in the sense-organs of Arthropoda, is surrounded by the canals of glandular cells. The latter form polygonal figures recalling the meshes in tulle net, and in the centre of the meshes a nervous filament ends.

Between the canals of glandular cells very abundant concretions are found; these stain with all the colouring reagents and remain after boiling in caustic potash.

The combination of glandular and sense-cells and their structure strongly recall olfactory organs, and I think that one ought to attribute such a function to the organs in question.

The structure as well as the evident function of the lateral cephalic organs of *Glomeris* approach those of the cephalic organs of segmented worms. If we remember that *Peripatus* retains traces in its adult stage of the cephalic organs well developed in the embryos and young examples, and that several other arthropods present in their development traces of remarkable cephalic organs, if we recollect, again, that the relationship between the segmented worms and the arthropods through the link furnished by *Peripatus* becomes more and more evident, we can evolve the hypothesis that the lateral cephalic organs of *Glomeris* are homologous with, and even perhaps analogous to, the cephalic organs of annelids.—*Comptes Rendus*, t. cxxix. (1899) pp. 504–506.